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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/599,072

09/19/2006

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EXAMINER

LAO, MARIALOUIA

ART UNIT

PAPER NUMBER

1621

MAIL DATE

DELIVERY MODE

04/25/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/599,072	Applicant(s) YOSHIKAWA, KOUJI	
	Examiner LOUISA LAO	Art Unit 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 February 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) 5-14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3 and 4 is/are rejected.
- 7) ☒ Claim(s) 2 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/7/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 2/14/08, with respect to the rejection(s) of claim(s) 1, 3-4 under 35 U.S.C. 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made, see discussion below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1, 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Elliot et al. JCS Perkin Trans. I, 1974, pp2470-2474 (*in IDS*) in view of Hoffman et al. J.Org.Chem. Vol. 27, July 1962, pp. 2687-2689 (*in IDS*) or Sakito et al. (JP58164542, JP'542) (*in IDS*)

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4. Applicants' claims are drawn to a method of making a (1-alkenyl)cyclopropane carboxylic ester represented by the formula (2), with substituents therein recited, comprising the decarbonylation of a (2-formyl-1-alkenyl)cyclopropane compound represented by formula (1) in the presence of a palladium catalyst.

5. Elliot et al. teach in p.2472 compounds of structure (1) and of structure (4); where structure (4) is a (2-formyl-1-alkenyl)cyclopropane; whereby structure (4) is shown to decarbonylate to its alkenyl analog, structure (5), which contains two hydrogen atoms in the alkenyl group (since C atom has valency of 4, it is understood that the other substituent therein is H).

6. The difference between the instant claims and Elliot et al. is the decarbonylation step using palladium catalyst. Hoffman et al. is relied upon to teach that at the time of Applicants' invention, decarbonylation in the presence of palladium catalyst was a prevalent practice (columns 1 bottom to column 2 top of p2687). Alternatively, JP'542 teaches (page 5 3rd¶) that decarbonylation agents for producing cyclopropane carboxylic acid derivatives can include *inter alia* transition metals of the GpVIII metals, like palladium.

7. At the time of Applicants' invention, one of ordinary skill in the art looking for a method to make a (1-alkenyl)cyclopropane carboxylic ester represented by the instant formula (2), similarly represented by Elliot et al.'s structure (5) from (2-formyl-1-alkenyl)cyclopropane, would have found it *prima facie* obvious to use the palladium catalyzed decarbonylation taught by Hoffman et al. or JP'542.

8. An artisan of ordinary skill in the art would have been motivated to use the palladium catalyzed decarbonylation taught by Hoffman et al. or JP'542 in a method to make a (1-

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alkenyl)cyclopropane carboxylic ester represented by Elliot et al.'s structure (5) from (2-formyl-1-alkenyl)cyclopropane, since the compounds are similarly represented by the instant formula (2) and the artisan would have reached a reasonable expectation of making the desired product. The claim would have been obvious because the particular technique of decarbonylation using alternate catalysts, which have been proven in the art as equally efficacious catalyst, is a known technique recognized as part of the ordinary capabilities of one skilled in the art.

The Supreme Court in *KSR* noted that if the actual application of the technique would have been beyond the skill of one of ordinary skill in the art, as in using decarbonylation using palladium catalyst, then the resulting invention would not have been obvious because one of ordinary skill could not have been expected to achieve it.

Allowable Subject Matter

9. Claim 2 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

10. The following is a statement of reasons for the indication of allowable subject matter: The prior art, made of record, is replete with methods of making (1-alkenyl)-formyl-cyclopropane carboxylic esters. However, the prior art neither teaches nor discloses the synthetic route of the instant process.

Conclusion

11. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Roussel Uclaf (GB1285350).

Correspondence

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Louisa Lao whose telephone number is (571)272-9930. The examiner can normally be reached on Mondays to Thursdays from 8:00am to 8:00pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler can be reached on 571-272-0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

0414-232008mll

Louisa Lao

Examiner

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/ROSALYND KEYS/

Primary Examiner, Art Unit 1621